

Work Order ID 54443

December 9, 2009 11:29:19 AM



Page 1

Item ID: D3304-044

Accept



Setup Start



Revision ID:

Stop



Item Name: Tube Assembly

Start Date: 09/12/2009 Start Qty: 10.00



Cust Item ID:

Required Date: 16/12/2009 Req'd Qty: 10.00



Customer:

Reference:

Run Start



Approvals: Process Plan: *RD*

Date: *09/12/09*

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3304

Rev B

100

0.00



BAND SAW

Bandsaw

Memo

0.00

Jeaspa Bandsaw

1- Cut blank: 22.00" as per Dwg D3304

mmf 09/12/10

10 *0*

110

0.00



CONVENTIONAL LATHE

Lathe Conv

Memo

0.00

Conventional Lathe

1- Cut blank: 22.00" as per Dwg D3304 2- Turn as per Dwg D3304 3- Deburr

mmf 09/12/10

10 *0*

120

0.00



QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

mmf 09/12/10

10 *0*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 54443

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Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

130 QC8- Inspect parts - second check

0.00



SA 09/12/16

10

0

QC

Memo

0.00

Quality Control

140

0.00



Small Fab

10X

Small Fab

Memo

0.00

Small Fab

1- Drill as per Dwg D3304 using drill Jig D3304-T1□2- Form as per Dwg D3304□3- Cut tube to length as per Dwg D3304□4-Check with DT8657 JIG□4- Deburr

=> M.L 09/12/21

150

0.00



QC5- Inspect part completeness to step on W/O

10

QC

Memo

0.00

Quality Control

05.12.23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Cust Item ID:

Required Date: 16/12/2009 Req'd Qty: 10.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 	Large Fab	0.00							
Large Fab	Memo	0.00							
Large Fab	Weld bracket as per Dwg D3304 and QSI 004 using DT8775								
170 	QC9- Inspect visual per QSI004- Fusion Welds	0.00							
QC	Memo	0.00							
Quality Control									
180 	QC5- Inspect part completeness to step on W/O	0.00							
QC	Memo	0.00							
Quality Control									

09.12.23

SP 10 01 04.

PD 10.01.05 (15)

22 8106105

(410)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 54443

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Item ID:	D3304-044	Accept		Setup	Start	
Revision ID:					Stop	
Item Name:	Tube Assembly					
Start Date:	09/12/2009	Start Qty:	10.00	Cust Item ID:		
Required Date:	16/12/2009	Req'd Qty:	10.00	Customer:		
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190 Powdercoat Powder Coating	Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3 M112588 Memo START TIME: 2:00 PM 2:30 PM FINISH TIME	0.00 0.00				X10	0		
200 QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00				10	0		
210 Small Fab Small Fab Small Fab	Small Fab Memo Assemble lanyard and pip pin as per Dwg D3304 Identify as D3304-044	0.00 0.00							

10/01/06 10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Item Name: Tube Assembly

Start Date: 09/12/2009 Start Qty: 10.00



Cust Item ID:

Required Date: 10/12/2009 Req'd Qty: 10.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

220

QC5- Inspect part completeness to step on W/O

0.00



27 8/10/06

QC

Memo

0.00

(40)

Quality Control

230

Identify as per dwg & Stock Location: _____

0.00



Packaging

Memo

0.00

Packaging

12/10/07 (10)

240

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/01/07
10-1-07
(10)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

Picklist Print

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Page 1

Work Order ID: 54443

Parent Item: D3304-044

Parent Item Name: Tube Assembly

Start Date: 09/12/2009

Required Date: 16/12/2009

Start Qty: 10.00

Required Qty: 10.00

Comments:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

CBL-1240

Purchased

No

100

Each

102.1380

10.4160



Cable

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

102.1379737

107234

102.137974

160

f

126.3000

19.5179

M304TR0.875W.065

Purchased

No



304 round tube .875 x .065w

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

MAT

126.3

110472

6.3

110680

120

210

Each

24.0000

10.0000

BLBS-0016

Purchased

No



PIP PIN

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

24

109414

24

EP 10/01/06

10.416

19.25 *mm 09/12/10*

EP 10/01/06

M113489 (10x)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Picklist Print

Page 2

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Work Order ID: 54443



Parent Item: D3304-044



Parent Item Name: Tube Assembly

Start Date: 09/12/2009

Required Date: 16/12/2009

Comments:

Start Qty: 10.00

Required Qty: 10.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

CBL-460

Purchased

No

210

Each

396.0000

20.0000



Loop Sleeve

Ep 10/01/06

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

396

111342

210

113002

186

20

D3304-8

Manufactured

No

210

Each

12.0000

10.0000



Bracket

Sp 10.01.04.

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

12

40908

1

44399

11

6x 9x ✓

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Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

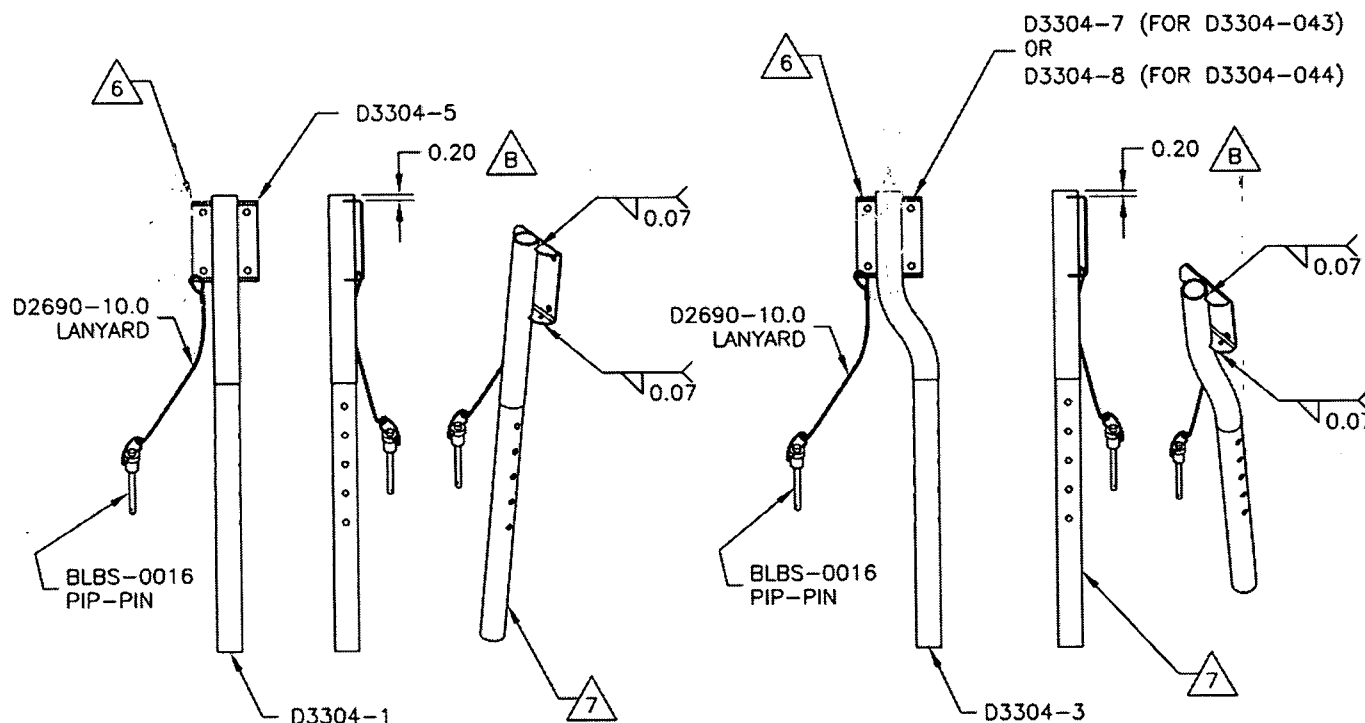
DART
 TOP COPY
 RETURN TO
 ENGINEERING
 UNCONTROLLED COPY
 SUBJECT TO AMENDMENT

WITHOUT NOTICE
 WORK ORDER

NO. 534413

05-09-12-9

DESIGN	RF	DRAWN BY	RF	DART AEROSPACE LTD HAMKESBURY, ONTARIO, CANADA
CHECKED	<i>[Signature]</i>	APPROVED	<i>[Signature]</i>	DRAWING NO. D3304
DATE	05.07.15	TITLE	TUBE ASSEMBLY	REV. B SHEET 1 OF 4 SCALE 1:6
A	04.08.18	NEW ISSUE		
B	05.07.15	UPDATE, DIMENSIONS: ADD D3304-7/-8		



D3304-041 TUBE ASSEMBLY

**D3304-044 TUBE ASSEMBLY (SHOWN)
 D3304-043 OPPOSITE**

D3304-041/-043/-044 NOTES:

- 1) FINISH: POWDER COAT GREY SANDTEX (REF. 4.3.5.6) PER DART QSI 005 4.3
- 2) WELD PER DART QSI 004
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) IDENTIFY AS INDICATED USING FINE POINT PERMANENT INK MARKER "TCCA-PDA, DART AEROSPACE LTD, P/N D3304-XXX B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA04-11"
- 7) IF BEING ASSEMBLED WITH D3303-041, ADD THE FOLLOWING USING A FINE POINT PERMANENT INK MARKER: "TCCA-PDA, DART AEROSPACE LTD, P/N D412-724-XXX B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA04-11"

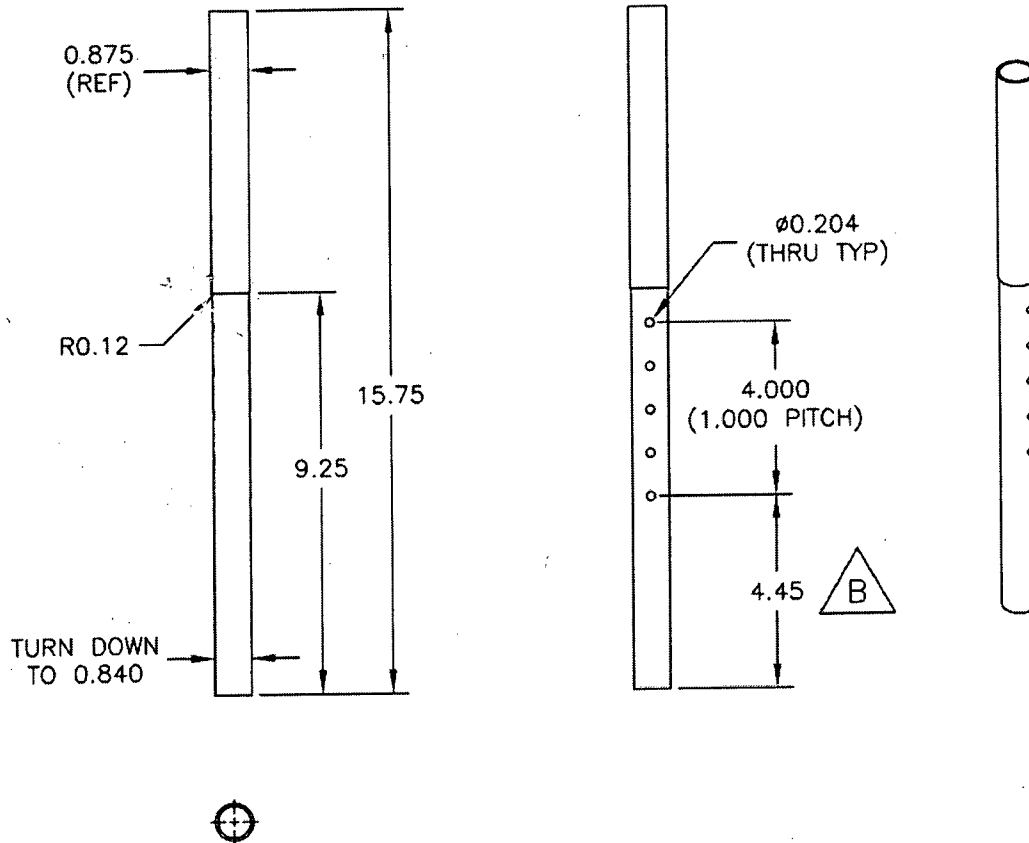
RELEASED
 05-08-11



w/o 54443

DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3304	REV. B SHEET 2 OF 4
DATE 05.07.15		TITLE TUBE ASSEMBLY	SCALE 1:4

RELEASED
05.08.11 *[Signature]*



D3304-1 TUBE

D3304-1 NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL TUBE $\phi 0.875 \times 0.065$ WALL (REF. DART SPEC M304TR0.875W.065) ENSURE SEAMLESS TUBE IS USED
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015

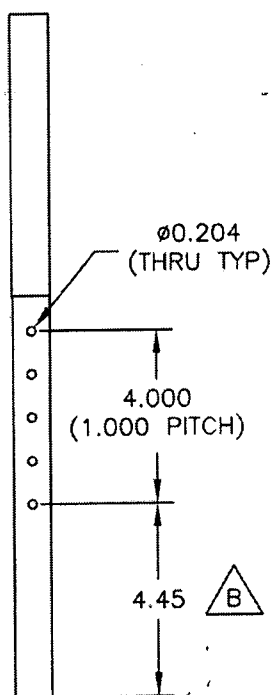
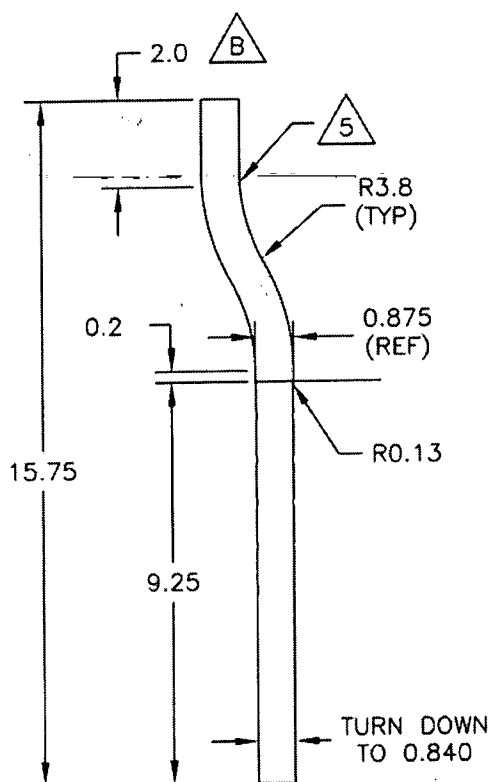
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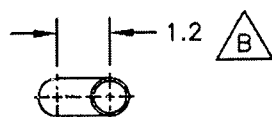


w/0 54443

DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3304	REV. B SHEET 3 OF 4
DATE 05.07.15		TITLE TUBE ASSEMBLY	SCALE 1:4



RELEASED
05-08-11 *[Signature]*



D3304-3 TUBE

D3304-3 NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL TUBE $\phi 0.875 \times 0.065$ WALL (REF. DART SPEC M304TRO.875W.065) ENSURE SEAMLESS TUBE IS USED
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) BEND LINES 9.625, 13.375 DIMENSIONS

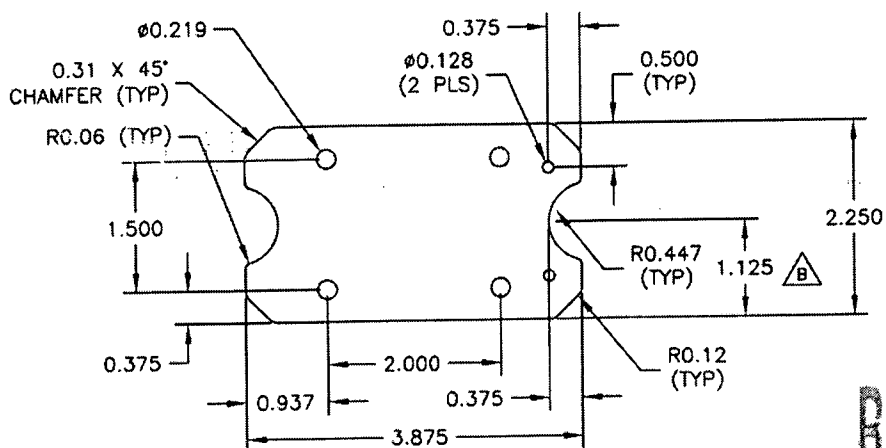
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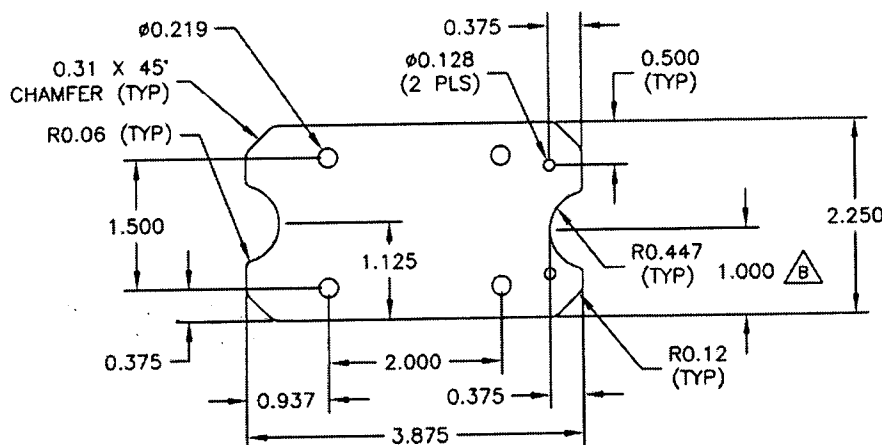
WFO 54443

DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3304	REV. B SHEET 4 OF 4
DATE 05.07.15		TITLE TUBE ASSEMBLY	SCALE 1:2

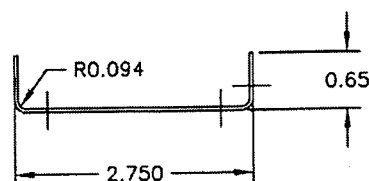


D3304-5 FLAT PATTERN

RELEASED
05.08.11



D3304-7/-8 FLAT PATTERN



**D3304-5/-7 BRACKET
D3304-8 OPPOSITE**

NOTES:

- 1) MATERIAL: AISI 304/316 SS 0.040 THICK SHEET (REF. DART SPEC M304S20GA)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015

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